Bemidji State University

BIOL 3710: Microbiology

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: *.*
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Structure, classification, and physiology of bacteria and related microorganisms. Lecture and laboratory.
Prerequisites or Corequisites: One year introductory biology and one year introductory chemistry or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/26/1997 - Present
C. OUTLINE OF MAJOR CONTENT AREAS
   1. Antimicrobial Chemotherapy
   2. Aseptic Technique
   3. Bacterial & Viral Identification
   4. Bacteriophages
   5. Clinical Microbiology, Epidemiology
   6. Clinical Microbiology
   7. Control of Microbial Growth
   8. Food Microbiology
   9. Historical Perspectives
   10. Human Diseases Caused by Bacteria & Viruses
   11. Human Diseases Caused by Fungi & Protozoa
   12. Industrial Microbiology
   13. Laboratory Safety and Epidemiology
   14. Measuring Microbes
   15. Microbes & Human History
   16. Microbial Ecology
   17. Microbial Evolution
   18. Microbial Genetics
   19. Microbial Growth Patterns
   20. Microbial Growth: Biosyntheise
   21. Microbial Growth: Cell Division
   22. Microbial Growth: Macromolecules
   23. Microbial Growth: Making of a Cell
   24. Microbial Growth: Nutrition & Energy
   25. Microbial Infections
   26. Microbial Interactions: Symbiosis, Predation, & Antibiosis
   27. Microbial Physiology
   28. Microbial Texonomy
   29. Microscopy
   30. Prokaryotic & Eukaryotic Cell Structures & Staining Methods
   31. Viruses of Eukaryotes
   32. Viruses

D. LEARNING OUTCOMES (General)
   1. identify the major characteristics that define the different taxa of microorganisms.
   2. understand the structure and function, genetics, biochemistry of microorganisms.
   3. practice basic principles of microbiological lab methods, including sterile techniques and basic microscopy.
   4. compare and contrast diverse-causing ability of various microorganisms.
   5. analyze the metabolic diversity and how it contributes to the ecology of microbes.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted